federal register

Friday
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Part V

Department of Labor

Mine Safety and Health Administration

Definition of Signaling Device; Removal of Design Restriction Requirement

DEPARTMENT OF LABOR

30 CFR Part 23

Definition of Signaling Device

AGENCY: Mine Safety and Health Administration (MSHA), Department of Labor.

ACTION: Proposed rule.

SUMMARY: This proposed rule amends 30 CFR Part 23, which sets forth the requirements and conditions for MSHA approval of permissible telephones and signaling devices for use in mines. The proposed amendment would delete a portion of the definition of "Signaling Device" because new developments in communications technology no longer require the design restriction included in the current definition. The amendment would also add a new paragraph (g) to § 23.7 which would require all line powered telephone and signaling devices to be equipped with a standby power source. Interested persons may participate in the rulemaking process by submitting written comments, suggestions and objections to the address provided below.

DATE: Comments must be received on or before October 21, 1980.

ADDRESS: Send comments to the Department of Labor, Mine Safety and Health Administration, Office of Standards, Regulations and Variances, Room 631, Ballston Tower No. 3, 4015 Wilson Boulevard, Arlington, Virginia 22203.

FOR FURTHER INFORMATION CONTACT: Frank A. White, (703) 235–1910.

SUPPLEMENTARY INFORMATION:

I. Rulemaking Background

The definition of a signaling device set forth in section 23.2 was issued on April 11, 1939, by the Bureau of Mines, as part of Schedule 9B (4 FR 1555) pursuant to An Act for the Protection of the Lives of Miners in the Territories, 51st Congress, Chapter 564 (1891). The specifications in Schedule 9B were not mandatory until the enactment of the Federal Coal Mine Safety Act (Pub. L. 89–552, sec. 212, 66 Stat. 709) in 1952. Schedule 9B became Part 23 when amended by Supplement I (20 FR 2975) on May 4, 1955. Subsequent amendments to Part 23 have not changed the definition of a signaling device.

Pursuant to section 101 of the Federal Mine Safety and Health Act of 1977, Pub. L. 91–173 as amended by Pub. L. 95–164, 91 Stat. 1291 (30 U.S.C. 811), the Secretary of Labor proposes to amend 30 CFR 23.2(f) to conform with advances in technology which have occurred since 1939.

II. Purpose and Effect of Rule

Section 23.2 is the "Definitions" section of 30 CFR Part 23. Section 23.2(f) defines "signaling device" and states that only signaling devices which are not designed to operate from a lighting or power circuit will be approved by MSHA as permissible equipment for use in mines. Because of the provision, MSHA is only allowed to approve telephones and signaling devices which are powered exclusively by batteries. This is a design restriction which was included in the definition in 1939 for two reasons: (1) signaling devices powered exclusively by batteries provided continuous communications in the event the mine power circuit failed or was cut off; and (2) technology at that time could not provide a means to insure that mine power circuits would be adequately isolated from signaling system circuits. Although § 23.7(a) requires circuits external to telephone and signaling devices to be intrinsically safe, insufficient isolation of the signaling system circuit from the mine power circuit could result in a higher level of current and voltage in the signaling system circuit, causing it to become unsafe. Damage to such a circuit could generate a spark capable of initiating an explosion in mines that have gassy or dust-laden atmospheres.

New technology, including the application of the concept of intrinsic safety and the use of solid state components has eliminated the hazards against which the restrictions contained in § 23.2(f) were directed. Communication systems exist today in which isolation between power circuits and intrinsically safe circuits is achieved through physical separation of bare circuit components and specially designed barrier circuits. The barrier circuits limit the maximum voltage and current that can be transmitted to the signaling system. Most European mine communication systems use a power supply that is isolated from the power circuit in this way and which continuously supplies a small current to the telephone or signaling device so as to maintain a "trickle" charge on the standby batteries in each device. The batteries provide communication capabilities when the mine power circuit is off.

The proposed rule would eliminate the current design restriction in § 23.2 (f) and permit MSHA to accept applications for the approval of telephones and signaling devices operated from mine power or lighting circuits. Also, a new paragraph would be added to § 23.7 to limit the approval of the line powered telephones and signaling devices to those provided with a standby power source, such as storage batteries with a charging feature. The new requirement is necessary to retain the communication capabilities provided by telephones and signaling devices powered exclusively by batteries. The amendment will also make Part 23 consistent with 30 CFR 75.1600–2(c) which requires operators who use a communication system that is powered solely from the mine electric system to provide a means to permit continued communications in the event the mine electric power fails or is cut off. The amended Part 23 would permit MSHA to approve mine telephones and signaling devices that increase the protection of miners' safety by providing more reliable communications and a direct connection to commercial lines for emergency situations.

III. Regulatory Analysis

It has been determined that this document does not contain a major proposal requiring the preparation of a regulatory analysis under Executive Order 12044 and the Department of Labor's final guidelines for implementing the Executive Order (44 FR 5570, January 26, 1979).

IV. Drafting Information

The principal persons responsible for preparation of this proposed rule are: Robert P. Lenart, Approval and Certification Center, MSHA; Herbert P. LeVan, Office of Standards, Regulations and Variances, MSHA; and Inga A. Watkins, Office of the Solicitor, Department of Labor.

Dated: August 14, 1980.

Robert B. Lagather,

Assistant Secretary for Mine Safety and Health.

Part 23, Chapter 1 of Title 30, Code of Federal Regulations, is proposed to be amended as follows:

PART 23—TELEPHONES AND SIGNALING DEVICES

§ 23.2 [Amended]

* * * * *

1. By revising paragraph (f) of § 23.2 to read as follows:

(f) "Signaling device." As used in this part, a signaling device is one that gives visual or audible signals.

§ 23.7 [Amended]

* * * * *

2. By adding a paragraph (g) to § 23.7 to read as follows:

(g) Line powered telephones and signaling devices shall be equipped with standby power sources capable of permitting the telephones or signaling devices to continue functioning in the event the line power fails or is cut off.

(Sec. 101, Pub. L. 91–173, 83 Stat. 745 as amended by Pub. L. 95–164, 91 Stat. 1291, (30 U.S.C. 811)

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